

1. Enhanced-surface-area spinal fusion apparatus adapted for use between an
2 upper vertebral body having an inferior vertebral endplate and a lower vertebral body
having a superior endplate, the distance between the endplates defining at least one
4 intervertebral spacing, the device comprising:

a biocompatible fusion device having a height which is greater than the
6 intervertebral spacing such that when implanted, at least a portion of the device
penetrates into one or both of the upper and lower vertebral bodies; and

8 a fastener configured to extend through the device and the vertebral body into
which the fusion device extends.

2. The apparatus of claim 1, wherein the fusion device includes an aperture
2 adapted to receive the fastener.

3. The apparatus of claim 1, wherein the fastener is treaded.

4. The apparatus of claim 1, further including a guide for aligning the
2 insertion of the fastener.

5. The apparatus of claim 4, wherein the guide is mountable on the fusion
2 device.

6. The apparatus of claim 4, wherein guide may be used for drilling and
2 installation of the fastener.

7. A method of promoting the fusion between upper and lower vertebra, each
2 vertebra having a body between superior and inferior endplates, the method comprising
the steps of:

4 removing a section of the upper vertebra, the lower vertebra, or both vertebra,
including a portion of its respective endplate;

6 installing the a fusion device between the vertebra so as to substantially consume
the removed sections; and

8 installing a fastener through the through the fusion device and each vertebra into
which the fusion device extends.

8. The method of claim 7, further including the steps of:
2 temporarily installing an alignment guide; and
installing the fastener using the guide.

9. The method of claim 8, wherein the alignment guide is mounted on the
2 fusion device.

10. The method of claim 8, wherein the alignment guide is used for drilling

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- 2 and orienting the fastener.

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